A DIVIDED FIRST DEVELOPER FOR CIBACHROME

by Richard Bisbey II

Those of you who have used Cibachrome have probably come to the conclusion that it is the most fantastic print material marketed today. You have probably also concluded that:

1. It is too contrasty,
2. It has severe crossover problems,
3. It is too expensive,
4. Practically ANY black and white developer or fixer can be substituted with results equivalent to the Cibachrome kit chemistry, and
5. No one seems to have formulated a good subsitute Dye Bleach to date.

Without a doubt, the single most obnoxious feature of Cibachrome is contrast. None of the tricks for lowering contrast such as overexposing and underdeveloping, diluting the developer, using softer developers, etc., seem to help very much. No matter how flat the original transparency, there will be some loss in highlight and/or shadow detail in the resulting Cibachrome print. Crossover, while not discussed as much, is also a significant problem. If you want to see it for yourself, try printing a gray scale on Cibachrome. The lowest density will print white, the highest will print black, the midpoint will be gray, and the remaining densities will be various shades of green and magenta.

For those of you willing to purchase five chemicals, help is on the way. For the past several months I have been using a divided first developer that has produced excellent results and that solves some of the problems.

1. It is soft. An entire gray scale can be printed without loss of either highlight or shadow detail. Your most contrasty Kodachromes and Ektachromes will yield prints that look exactly like the original transparency, not like color prints made from litho negatives.
2. Crossover is reduced. There is considerably less crossover with the divided developer than with the Cibachrome kit first developer.
3. It is cheap. The bath containing the developing agents and the bromide (the expensive chemicals) can be reused. The bath containing the inexpensive alkali is used one-shot. By purchasing the Cibachrome Bleach separately and mixing your own developer and fixer, chemistry costs are by about one half.

This fantastic formula is actually a black and white print developer published in an article by Paul Farber (November 1968, Dignan Newsletter), and brought to my attention Dr. M.L. Ellzey, Jr., University of Texas. In Farber's article, he said that he believed the formulas constituted " . . . a 'Universal' development system . . . ". Little did he know how right he was! The formulas are:

BATH A

Metol	6.5 gm
Sodium Sulfite	35.0 gm
Hydroquinone	2.8 gm
Potassium Bromide	2.8 gm
Sodium Chloride (salt)	.6 gm
Water to	1.0 l

BATH B

Sodium Carbonate (mono.)	105.0 gm
Water to	1.0 l

PROCESSING TIME AT 75°F

Bath A	1 minute
Bath B	2 minutes
Cibachrome Kit Bleach	4 minutes
Fix	3 minutes
Wash	3 minutes

All times include a 15 second drain time. NO RINSE SHOULD OCCUR BETWEEN THE A AND B BATHS. After use, Bath A can be returned to its original container and reused. Bath B, the Bleach, and the Fix are used one shot.

GENERAL OBSERVATIONS

The lower contrast is probably due to a number of factors including the high metol to hydroquinone ratio, and the local exhaustion of developer in the B Bath.

While I have heard and read claims that the A Bath can be used "to the last drop" or that it "will last for years", I have my doubts. I started with 200 mls of the A Bath; several months (and about 25 8X10's) later I was down to less than 75 mls of very orange aerial oxidized A Bath. Obviously limits exist to reuse. They are undoubtedly based on storage, by-products of development, equipment used, and contamination by other chemicals. Perhaps only 100-200 8X10's can be processed per liter of A Bath, but even if the A Bath is used one shot, it's still cheap!

REICHNER'S SUBSTITUTE FORMULAS

For those of you who have been experimenting with the Reichner Substitute Dye Bleach and Silver Blix, the following comments may be helpful:

1. The Silver Blix is not strong enough to remove all the silver. You can check this by rebleaching/fixing portions of a print. Try the E-6 Blix (Dignan, Vol. 4, No. 2, 1976) or a separate copper sulfate bleach followed by fixer.
2. The times given for the Dye Bleaching were short. Better results can be obtained if Dye Bleach time is extended to 6-7 minutes.

Even with increased Dye Bleaching time and better silver bleach/fixing, whites will still not be as good as those obtained with the Cibachrome Kit Bleach.